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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,955	03/26/2004	Robert C. Arnott	5752	9824
25280 7590 07/19/2007 Legal Department (M-495) P.O. Box 1926 Spartanburg, SC 29304				
			EXAMINER MATZEK, MATTHEW D	
			ART UNIT 1771	PAPER NUMBER
			MAIL DATE 07/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/810,955

Applicant(s)

ARNOTT, ROBERT C.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/8/2007 has been entered.

Response to Amendment

2. The amendment dated 5/8/2007 has been fully considered and entered into the Record. Claims 1-31 are currently pending; claim 32 has been cancelled. Claims 1-20 have been withdrawn from consideration. Claims 21-31 are currently active. Previously active claim 32 has been incorporated into claim 21. Claim 21 has also been amended to require the polymer finish to be applied as one layer. Amended claim 21 contains no new matter. The previous art rejection made in view of Yilgör et al. and Masumoto et al. has been withdrawn because the prior art fails to teach the application of the polymer in a single layer.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 21, 23 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US 5,981,407) in view of Golumbic (US 6,001,906).

a. Matsumoto et al. teach a flame retardant fabric (Abstract) comprising a halogen containing polyester fiber (col. 2, lines 27-30). The halogen containing fiber may comprise a phosphorus compound such as tris(2,3-dichloropropyl) phosphate (col. 3,

lines 15-17). The applied fabric is woven (Examples). Matsumoto et al. fail to teach the use of a protective film for the fabric.

b. Golumbic teaches a coating comprising polyurethane to produce a tough, durable, protective film firmly bonded to the surface (abstract). The coating may comprise a combination of a polyurethane having an elongation of approximately 400% mixed with a relatively soft polyurethane having an elongation of approximately 700% (col. 3, lines 21-38) and may be used for clothing. The coating may transparent (col. 2, lines 18-19). The polyurethanes of the applied invention are aliphatic polyurethanes (claim 4). The SPENSOL® polymers used by the patentee are aliphatic polyester polyurethanes.

c. Since Matsumoto et al. and Golumbic are from the same field of endeavor (i.e. protective fabrics), the purpose disclosed by Golumbic would have been recognized in the pertinent art of Matsumoto et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Matsumoto et al. with the motivation of providing the fabric with impact and abrasion resistance, toughness, and outstanding stain and chemical resistance as disclosed by Golumbic (col. 1, line 60-col. 2, line 8).

e. The relative amounts of each urethane polymer and the coating's add-on weight percentage are result-effective variables affecting the toughness and flexibility of the coated fabric (col. 3, lines 34-37, Golumbic). Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the claimed ratio, it would have been obvious to one of ordinary skill in the art to optimize this result-

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effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

f. Although neither Matsumoto et al. nor Golumbic explicitly teach the claimed finish with a stiff hand or flammability, it is reasonable to presume that said properties are inherent to combined invention. Support for said presumption is found in the use of like materials (i.e. a blend of polyurethanes for imparting toughness and flame retardant cloth). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of a finish with a stiff hand and flammability would obviously have been present one the combined invention is provided. Reliance upon inherency is not improper even though the rejection is based on Section 103 instead of Section 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

4. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US 5,981,407) in view of Golumbic (US 6,001,906) as applied to claim 21 above, and further in view of Yilgör et al. (US 5,521,273).

Matsumoto et al. discloses the claimed invention except that woven fabrics instead of knitted or nonwoven fabrics, Yilgör et al. shows that knitted and nonwoven fabrics are equivalent structures known in the art (col. 5, lines 22-26). Therefore, because these materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute woven fabrics for nonwoven or knitted fabrics.

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Response to Arguments

5. Applicant's arguments with respect to claims 21-31 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzék whose telephone number is 571.272.2423. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571.272.1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mdm



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